Listing of Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1.-106. (Canceled)

107. (Currently Amended) A method of isolating an end population of muscle-derived progenitor cells (MDCs), comprising:

(a)[[.]] plating a suspension of muscle cells from muscle tissue in a first collagen-coated container to which fibroblast cells of the muscle cell suspension adhere;

(b)[[.]] re-plating non-adherent cells from step (a) in a second collagen-coated container when approximately [[30-]] 15 to 40% of the cells from the cell suspension have adhered to the first container;

(c)[[.]] repeating step (b) at least once to enrich for an end population of viable, non-fibroblast, desmin-expressing cells in the second container; and

(d)[[.]] isolating the MDCs as the end population of viable, non-fibroblast, desmin-expressing cells.

108. (Canceled)

109. (Previously presented) The method according to claim 107, wherein the muscle tissue of step (a) is skeletal muscle.

110. (Previously presented) The method according to claim 107, wherein step (b) is repeated at least five times.

111. (Currently amended) The method according to claim 107, wherein ~~the isolating~~ step (d) occurs at 5 days following step (b).

112. (Currently amended) The method according to claim 107, wherein ~~the isolating~~ step (d) occurs at 6 days following step (b).

113. (Canceled)

114. (Currently amended) The method according to claim 107, wherein a [[A]] clonal population of MDCs ~~obtained from the cells isolated according to claim 113~~ is prepared following step (d).

115.-153. (Canceled)

154. (New) A method of augmenting or bulking esophageal muscle tissue in a recipient, comprising: introducing a physiologically-acceptable composition comprising MDCs isolated according to claim 107 or claim 114 into an area of esophageal muscle tissue of the recipient in an amount sufficient for the MDCs to augment or bulk the esophageal muscle tissue.

155. (New) The method according to claim 154, wherein the esophageal muscle tissue is smooth or skeletal esophageal muscle tissue.

156. (New) The method according to claim 154, wherein augmenting or bulking the esophageal muscle tissue ameliorates a weakness or dysfunction in the esophageal muscle tissue.

157. (New) The method according to claim 154, wherein the composition is introduced into the recipient by an administration route selected from injection or intravenous delivery.

158. (New) The method according to claim 154, wherein the composition further comprises a carrier, excipient, or diluent.

159. (New) The method according to claim 158, wherein the carrier comprises an absorbent or adherent material.

160. (New) The method according to claim 158, wherein the carrier is a collagen sponge material.

161. (New) The method according to claim 154, wherein the esophageal muscle tissue is gastroesophageal muscle tissue.

162. (New) The method according to claim 161, wherein augmenting or bulking the gastroesophageal muscle tissue ameliorates a weakness or dysfunction in the gastroesophageal muscle tissue.

163. (New) A method of augmenting or bulking sphincter muscle tissue in a recipient, comprising: introducing a physiologically-acceptable composition comprising MDCs isolated according to claim 107 or claim 114 into an area of sphincter muscle tissue of the recipient in an amount sufficient for the MDCs to augment or bulk the sphincter muscle tissue.

164. (New) The method according to claim 163, wherein the sphincter muscle tissue is smooth or skeletal sphincter muscle tissue.

165. (New) The method according to claim 163, wherein augmenting or bulking the sphincter muscle tissue ameliorates weakness or dysfunction in the sphincter muscle tissue.

166. (New) The method according to claim 163, wherein the composition is introduced into the recipient by an administration route selected from injection or intravenous delivery.

167. (New) The method according to claim 163, wherein the composition further comprises a carrier, excipient, or diluent.

168. (New) The method according to claim 167, wherein the carrier comprises an absorbent or adherent material.

169. (New) The method according to claim 167, wherein the carrier is a collagen sponge material.

170. (New) A method of augmenting or bulking bladder muscle tissue in a recipient, comprising: introducing a physiologically-acceptable composition comprising MDCs isolated according to claim 107 or claim 114 into an area of bladder muscle tissue of the recipient in an amount sufficient for the MDCs to augment or bulk the bladder muscle tissue.

171. (New) The method according to claim 170, wherein the bladder muscle tissue is bladder smooth muscle tissue.

172. (New) The method according to claim 170, wherein augmenting or bulking the bladder muscle tissue ameliorates weakness or dysfunction in the bladder muscle tissue.

173. (New) The method according to claim 170, wherein the bladder muscle tissue is ureteral-bladder muscle tissue.

174. (New) The method according to claim 170, wherein the composition is introduced into the recipient by an administration route selected from injection or intravenous delivery.

175. (New) The method according to claim 170, wherein the composition further comprises a carrier, excipient, or diluent.

176. (New) The method according to claim 175, wherein the carrier comprises an absorbent or adherent carrier material.

177. (New) The method according to claim 175, wherein the carrier is a collagen sponge material.

178. (New) A method of ameliorating a cosmetic or aesthetic defect by augmenting or bulking smooth muscle tissue in a recipient, comprising: introducing a physiologically-acceptable composition comprising MDCs isolated according to claim 107 or claim 114 into an area of smooth muscle tissue in an amount sufficient to ameliorate the cosmetic or aesthetic defect.

179. (New) The method according to claim 178, wherein the cosmetic or aesthetic defect is selected from one or more of wrinkles, rhytids, stretch marks, depressed scars, acne vulgaris scars, lip hypoplasia, or dermatological lesions.

180. (New) The method according to claim 178, wherein the composition is introduced into the recipient by an administration route selected from subcutaneous injection or intradermal injection.

181. (New) The method according to claim 178, wherein the composition further comprises a carrier, excipient, or diluent.

182. (New) The method according to claim 181, wherein the carrier comprises an absorbent or adherent material.

183. (New) The method according to claim 181, wherein the carrier is a collagen sponge material.

184. (New) A method of augmenting or bulking muscle tissue comprising one or more of a cutaneous depression, wound, fissure, or opening in an individual, comprising: introducing a physiologically-acceptable composition comprising MDCs isolated according to claim 107 or claim 114 into an area of muscle tissue in need thereof, in an amount sufficient for said MDCs to augment or bulk the muscle tissue comprising the one or more cutaneous depression, wound, fissure, or opening.

185. (New) The method according to claim 184, wherein the cutaneous depression, wound, fissure, or opening is selected from diverticulae, cysts, fistulae, or aneurysms.

186. (New) The method according to claim 184, wherein the composition is introduced into the recipient by an administration route selected from injection or intravenous delivery.

187. (New) The method according to claim 184, wherein the composition further comprises a carrier, excipient, or diluent.

188. (New) The method according to claim 187, wherein the carrier comprises an absorbent or adherent material.

189. (New) The method according to claim 187, wherein the carrier is a collagen sponge material.

190. (New) A method of augmenting or bulking esophageal muscle tissue in a recipient, comprising: introducing a physiologically-acceptable composition comprising isolated, desmin-expressing, skeletal muscle-derived progenitor cells, or a clonal population thereof, into an area of esophageal muscle tissue of the recipient in an amount sufficient for said cells to augment or bulk the esophageal muscle tissue.

191. (New) The method according to claim 190, wherein the esophageal muscle tissue is smooth or skeletal esophageal muscle tissue.

192. (New) The method according to claim 190, wherein augmenting or bulking the esophageal muscle tissue ameliorates weakness or dysfunction in the esophageal muscle tissue.

193. (New) The method according to claim 190, wherein the composition is introduced into the recipient by an administration route selected from injection or intravenous delivery.

194. (New) The method according to claim 190, wherein the composition further comprises a carrier, excipient, or diluent.

195. (New) The method according to claim 194, wherein the carrier is a collagen sponge material.

196. (New) The method according to claim 190, wherein the esophageal muscle tissue is gastroesophageal muscle tissue.

197. (New) A method of ameliorating a cosmetic or aesthetic defect by augmenting or bulking smooth muscle tissue in an individual, comprising: introducing a physiologically-acceptable composition comprising isolated, desmin-expressing, skeletal muscle-derived progenitor cells, or a cloned population thereof, into an area of smooth muscle tissue in an amount sufficient for said cells to ameliorate the cosmetic or aesthetic defect.

198. (New) The method according to claim 197, wherein the cosmetic or aesthetic defect is selected from wrinkles, rhytids, stretch marks, depressed scars, acne vulgaris scars, lip hypoplasia, or dermatological lesions.

199. (New) The method according to claim 197, wherein the composition further comprises a carrier, excipient, or diluent.

200. (New) The method according to claim 199, wherein the carrier is a collagen sponge material.

201. (New) A method of augmenting or bulking sphincter muscle tissue in a recipient, comprising: introducing a physiologically-acceptable composition comprising isolated, desmin-expressing, skeletal muscle-derived progenitor cells, or a clonal population thereof, into an area of sphincter muscle tissue of the recipient in an amount sufficient for said cells to augment or bulk the sphincter muscle tissue.

202. (New) The method according to claim 201, wherein the sphincter muscle tissue is smooth or skeletal sphincter muscle tissue.

203. (New) The method according to claim 201, wherein augmenting or bulking the sphincter muscle tissue ameliorates weakness or dysfunction in the sphincter muscle tissue.

204. (New) The method according to claim 201, wherein the composition further comprises a carrier, excipient, or diluent.

205. (New) The method according to claim 204, wherein the carrier is a collagen sponge material.

206. (New) A method of augmenting or bulking bladder muscle tissue in a recipient, comprising: introducing a physiologically-acceptable composition comprising isolated, desmin-expressing, skeletal muscle-derived progenitor cells, or a clonal population thereof, into an area of bladder muscle tissue of the recipient in an amount sufficient for said cells to augment or bulk the bladder muscle tissue.

207. (New) The method according to claim 206, wherein the bladder muscle tissue is smooth or skeletal bladder muscle tissue.

208. (New) The method according to claim 206, wherein augmenting or bulking the bladder muscle tissue ameliorates weakness or dysfunction in the bladder muscle tissue.

209. (New) The method according to claim 206, wherein the bladder muscle tissue is ureteral-bladder muscle tissue.

210. (New) The method according to claim 206, wherein the composition further comprises a carrier, excipient, or diluent.

211. (New) The method according to claim 210, wherein the carrier is a collagen sponge material.

212. (New) A method of augmenting or bulking muscle tissue comprising one or more of a cutaneous depression, wound, fissure, or opening in an individual, comprising: introducing a physiologically-acceptable composition comprising isolated, desmin-expressing, skeletal muscle-derived progenitor cells, or a clonal population thereof, into an area of muscle tissue in need thereof, said cells in an amount sufficient to augment or bulk the muscle tissue comprising the one or more cutaneous depression, wound, fissure, or opening.

213. (New) The method according to claim 212, wherein the cutaneous depression, wound, fissure, or opening is selected from diverticulae, cysts, fistulae, or aneurysms.

214. (New) The method according to claim 212, wherein the composition further comprises a carrier, excipient, or diluent.

215. (New) The method according to claim 214, wherein the carrier is a collagen sponge material.

216. (New) A method of isolating an end population of muscle-derived progenitor cells (MDCs), comprising:

(a) plating a suspension of muscle cells from muscle tissue in a first container to which fibroblast cells of the muscle cell suspension adhere;

(b) re-plating non-adherent cells from step (a) in a second container when approximately 15 to 40% of the cells from the cell suspension have adhered to the first container;

(c) repeating step (b) at least once;

(d) isolating the MDCs; and

(e) optionally isolating a clonal population of the MDCs from step (d).

217. (New) A method of augmenting or bulking tissue selected from one or more of esophageal muscle tissue, gastroesophageal muscle tissue, sphincter muscle tissue, bladder muscle tissue, ureteral-bladder muscle tissue, or skin tissue in a recipient, comprising: introducing a physiologically-acceptable composition comprising MDCs isolated according to claim 216, or a clonal population thereof, into an area of the recipient's tissue in an amount sufficient for the MDCs to (i) augment or bulk the tissue and/or (ii) ameliorate weakness or dysfunction in the tissue.